SPECIFICATION

To All Whom It May Concern:

Be It Known That I, SUNNY EN LIUNG HUANG, being a citizen of the United States, and residing in the City of Burbank, and State of California, having a residential address at 786 Via Monte Video, Claremont, California 91711, have invented new and useful improvements in

COLLAPSIBLE CONTAINER FOR STORAGE

CROSS REFERENCE TO RELATED APPLICATION

This non-provisional patent application is based upon the provisional application having Serial No. 60/409,412, which was filed on September 11, 2002.

Background of the Invention

Obviously, there are a myriad of containers for use for storage purposes. Some of them may even be foldable, so as to reduce them in size as when not in use.

Examples of these type of prior art devices can be seen in earlier United States patents, such as U.S. Patent No. 5,560,385, No. 5,664,596, No. 5,816,279, No. 6,006,772, No. 6,269,826, in addition to United States Patent No. 6,220,998.

Summary of the Invention

This invention principally relates to a collapsible container, that may be used for a variety of purposes, which when fully erected may supply ample space for storage, function as a laundry bag, or even as a trash collector, but when not in use, may fold up into a greatly reduced size, for convenience of storage, or for even locating within luggage, or the like, during travel.

This invention contemplates the usage of springsteel or carbon, which will include a sufficient amount of flexibility, so that the steel may be shaped into and configured into a supporting structure, when erected, and in its steady state condition, but which when collapsed, can be folded reasonably flattened, into a layered condition, to significantly reduce the size of the framework, and allow it to be more easily stored, as aforesaid. The framework may have an outer covering, either of cloth, mesh, or other polymer material, so as to furnish walls and a base for the structural framework, and act as the collector, during usage of this collapsible container.

The framework, which may be formed of steel, carbon, or perhaps even polymer or any such highly resilient material, is configured so as to undertake a natural and steady state, that provides a structural framework in the erected position, such that when the cloth material is applied thereon, in its steady state, will be fully opened, and stand vertically, and accept items to be stored, or trash,

or even soiled clothing, for laundry purposes, therein. But, the framework is of the type that may be highly resilient, so that it may be folded over on itself, collapsed, into a flattened condition, to facilitate and add to the convenience of usage of this device, as when not in use, and allow for its convenient storage.

It is, therefore, the principal object of this invention to provide a highly resilient framework, for a mesh or cloth material, to form a laundry basket for usage.

Another object of this invention is to provide a framework, for flexible cloth or other material, which when erected, can conveniently function as a trash container.

Still another object of this invention is to provide a highly resilient framework, covered with a cloth or other mesh material, which when erected, can be used for storage purposes.

Still another object of this invention is to provide a highly resilient framework for any one of a trash bag, storage container, or laundry basket, and which can be conveniently collapsed, so as to facilitate the storage of the container, as when not in usage.

Yet another object of this invention is to provide a flexible cloth or polymer material, or mesh type material, that may include various cowlings around select of its perimeter, so as to allow for the permanent fixation or removeably connectable to the resilient framework of this invention, to afford storage, trash collecting, or gathering of soiled clothing for laundry, as when in use.

Another object of this invention is to provide a framework for a storage container, fabricated of a highly resilient material, so that when the framework is held in the collapsed stage, when released, will spring back into its usable steady state condition, to form the structure for supporting such a container during usage.

These and other objects may become more apparent to those skilled in the art upon review of the summary of the invention as provided herein, and upon undertaking a study of the description of its preferred embodiment, in view of the drawings.

Brief Description of the Drawings

In referring to the drawings, Fig. 1 shows a storage, trash, or laundry container having a framework that supports its fabric lining in a rectangular configuration during usage an application;

Fig. 2 shows the framework of the container partially collapsed, at one end, during its disassembly;

Fig. 3 shows the remaining portion of the storage container being collapsed into a reasonably flattened configuration;

Fig. 4 shows how the container, and its framework, has been collapsed into a series of triangular like laminated but integral portions for the storage container of this invention, as when not in use;

Fig. 5 shows one arrangement of the resilient framework for the storage container of this invention;

Fig. 6 shows how the framework may be laid on one side, covered with the fabric material, to form a storage container of the shown configuration;

Fig. 7 discloses a modification to the storage container of this invention wherein its framework may include a pair of cross arranged frame elements, which when erected, and covered with the fabric, forms a storage container as disclosed;

Fig. 8 shows another form of storage container wherein its framework may be formed of one or a pair of resilient supporting members, shaped into the configuration to furnish a cylindrically designed container covered with fabric material, but yet which may be collapsed into a reasonably flattened condition during storage and shipment;

Fig. 9 is a bowed style of framework for collapsible container for storage;

Fig. 10 shows the framework embodied in covering material;

Fig. 11 shows the attachment between the midsections of the bowed framework;

Fig. 12 shows another means of attachment between the approximate center of the bowed framework;

Fig. 13 discloses a rectangular or square style of side frames formed of resilient material performing the collapsible container for storage of this invention; and

Fig. 14 shows such framework enclosed within a material covering.

Description of the Preferred Embodiments

In referring to the drawings, and in particular Fig. 1, one example of the collapsible container for storage in this invention, regardless whether the container be used for storage, a trash basket, a laundry bag, or the like, is readily disclosed. The storage container 1 is fabricated incorporating a structural framework 2, which in this particular instance, in its natural and steady state assembly, has an integral series of frame members, which form one side 3 of the container, an opposite side 4, bottom framework 5, and the upper frames 6, as can be noted. As previously summarized, this type of framework may be fabricated from a highly resilient steel, carbon, polymer, or other composite material, which when molded into the configuration and shape, as shown in Fig. 1, is the steady state condition for the framework, and that position into which the framework will always be urged, in this condition, affording a framework for supporting of the mesh, cloth, or other fabric material 7 that forms the walls 8 in addition to the bottom wall 9 of the disclosed storage container.

The framework 2, as fabricated from the type of materials as described, may more specifically be formed from springsteel, having model No. _____, readily available from _____Company, of _____, _____.

Utilizing the type of springsteel or other composite material to form the framework 2 of this invention, therefore allows the framework to be collapsed into a non usable and lesser space requiring condition, and as can be seen in Fig. 2, the one side wall 8 is shown being partially collapsed, as noted, during the folding of the storage container into a non-usable position. Fig. 3 discloses how, when the side 8 has been folded over, the opposite side 8 can then be further collapsed, into a flattened position, and then the entire flattened container can be folded over into a triangular form, as noted in Fig. 4, and fastened by a binder 10 for storage, as noted. One can easily see how the storage container, when collapsed, as shown in Fig. 4, is a much lesser space demanding structural item, then when it is maintained in its usable position, as shown in Fig. 1. As shown in Fig. 1, the upper end of the storage container is opened, which will allow the deposit of any soiled clothing, if it is used as a laundry basket, or any trash, should it be used as a trash container, or for the deposit of any other material, for storage, as can be readily understood.

Another example of a modification to the structure of the storage container of this invention can be seen in Fig. 5. This particular embodiment simply discloses the framework, with a covering material removed, and before it is installed, with the framework having a crossover bottom, as at 11, before the covering material is applied thereto. But, even in this configuration, the framework will be capable of being collapsed into a flattened laminar condition, not too unlike that as previously shown and explained with respect to Fig. 4.

Fig. 6 discloses how the framework may be arranged in other positions, and as can be seen, the framework 12 may have a cross over positioned at a side wall, such as in the side wall 13, but yet provides sufficient support, due to

the arrangement and alignment of its various frame members, in order to form a type of framework that will hold the cloth material, in this condition, generally in a rectangular configuration, with an opened top, as at 14, where goods may be deposited therein. Obviously, a crossover of the framework could be located in the bottom, as previously explained with respect to Fig. 5, or on the opposite side wall 15, or even in the front or back walls 16, as can be understood.

The configuration for the framework for the storage container of this invention, in a further modification, is disclosed in Fig. 7. In this position, the framework 17 may comprise a pair of rectangular or square frame members 18 and 19, which may be pivotally connected at their crossover positions 20 and 21, or may be fabricated from a single length of such resilient steel or composite material, to form a unified framework, as noted. Then, the covering material 22 may be applied thereto, so as to form the side walls 23 and 24, or the front and back walls 25 and 26, and the bottom wall 27 as can be understood. Obviously, the top will be opened, in order to allow easy access of any materials to be stored or disposed of therein, as noted. Furthermore, the upper edges of the side walls may include cowlings, as at 28, and which will be affixed around the upper transverse integral rod members 29, formed of the framework 17, as previously explained. In addition, there may be provided a top covering member (not shown), that may be either stitched to or integrally formed of one of the upper cowlings 28, so that it may drape over the upper opening 30, to provide it with closure, to add to the appearance of this storage container, during usage.

Fig. 8 discloses a further modification to the storage container 31 of this invention. It may include an integral framework 32 which may be integrally formed of one frame member, into the configuration as shown at 33, or it may be fabricated from two frame members 34 and 35, pivotally held together at their crossover points, as at 36, to form the framework for the storage container as it is fabricated. The upper and bottom edges of the frame members 33 and 34 may be integrally arcuately shaped, as at 37, at their upper edge, but may also

have similar type of arcuate shape, to form the bottom edge 38, so as to configure the framework to support the fabric material 39 into a cylindrical configuration, incorporating a base fabric 40 as shown. In addition, it just as likely that this framework 32 may likewise be collapsed, under its inherent resiliency, into a reasonably flattened configuration, as during storage, but once released, will spring back into the cylindrical shape, as noted, ready for usage as a storage container for the variety of purposes as previously referred to.

Figs. 9-12 show a bowed type of framework, of the highly resilient type, that can be formed into the configuration of the framework, in a natural state, enclosed within a material covering, to form a collapsible storage container.

Figs. 13 and 14 disclose the use of related type of resilient material that form side frames, for the type of storage container, which is of the collapsible form, as shown in Fig. 14.

Variations or modifications to the subject matter of this invention may occur to those skilled in the art upon review of the disclosure as provided herein. Such variations, if within the spirit of this development, are intended to be encompassed within the scope of the invention as depicted herein. The descriptions of the preferred embodiments, and their modifications thereof, and as disclosed in the drawings, are set forth for illustrative purposes only.